

**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

- 1-28. (Cancelled)
29. (Currently Amended) A composition for the growth of apatite, fluoroapatite, or dentine on tooth material, comprising
  - (a) [[an]] a pre-treating alkaline medium comprising calcium ions,
  - (b) growth-promoting components i, ii, and iii:
    - [[c]] i. a first gel comprising gelatin and phosphate ions,
    - [[d]] ii. a second gel, which is free of phosphate ions and calcium ions, capable of covering a first layer of said first gel with a layer of the second gel, and
    - [[e]] iii. a growth-promoting solution containing calcium ions,  
wherein said pre-treating alkaline medium and each of said components are kept separate until use of said composition.
30. (Previously Presented) The composition of claim 29, wherein the first gel further comprises at least one calcium phosphate compound.
31. (Currently Amended) A multi-component composition for the growth of growing biomimetic enamel-like apatite, fluoroapatite or dentine on tooth material, comprising

- (i) an alkaline medium, the alkaline medium further pre-treating component comprising calcium ions,
- (ii) a first gel comprising gelatin and phosphate ions, and
- (iii) a second gel which is free of phosphate ions, which is capable of covering a first layer of the first gel with a layer of this second gel,  
wherein said second gel is effective for locally separating reactive ions  
in said composition to effect said growth of biomimetic enamel-like  
apatite, fluoroapatite or dentine on said tooth material.

32. (Previously Presented) The composition of claim 29, wherein the alkaline medium is an alkaline solution or an alkaline gel.

33. (Previously Presented) The composition of claim 29, wherein the alkaline medium has a pH of 7.1 to 14.

34. (Previously Presented) The composition of claim 29, wherein the alkaline medium comprises 0.05 to 1N NaOH.

35. (Cancelled).

36. (Previously Presented) The composition of claim 29, wherein the first gel is a gelatin-glycerol gel.

37. (Previously Presented) The composition of claim 29, wherein the first gel further comprises fluoride ions.

38. (Previously Presented) The composition of claim 29, wherein the first gel has a pH of 2.0 to 6.0.

39. (Previously Presented) The composition of claim 30, wherein the calcium phosphate compound is selected from the group consisting of fluoroapatite, monetite, brushite, amorphous calcium phosphate, and hydroxylapatite.

40. (Previously Presented) The composition of claim 30, wherein the calcium phosphate compound is fluoroapatite.

41. (Previously Presented) The composition of claim 40, wherein the fluoroapatite is in the form of spherical particles.

42. (Previously Presented) The composition of claim 30, wherein the first gel contains 5 to 30% by weight of calcium phosphate compounds.

43. (Previously Presented) The composition of claim 42, wherein said calcium phosphate compounds are fluoroapatite particles.

44. (Previously Presented) The composition of claim 30, wherein the first gel contains spherical particles of calcium phosphate compounds.
45. (Previously Presented) The composition of claim 44, wherein said calcium phosphate compounds are spherical particles of fluoroapatite.
46. (Previously Presented) The composition of claim 30, wherein the calcium phosphate compound comprises particles having an average size of 5 to 50  $\mu\text{m}$ .
47. (Previously Presented) The composition of claim 46, wherein the average size of said particles is 10 to 20  $\mu\text{m}$ .
48. (Previously Presented) The composition of claim 29, wherein the second gel is also free of fluoride ions.
49. (Previously Presented) The composition of claim 29, wherein the second gel is selected from the group consisting of gelatin-glycerol gels, polysaccharide gels and carboxymethyl-cellulose gels.
50. (Cancelled).
51. (Previously Presented) The composition of claim 29, wherein the solution containing calcium ions has a pH of 6 to 8.

52. (Previously Presented) The composition of claim 29, wherein said tooth material is human teeth or human tooth enamel.

53. (Withdrawn) A kit for the growth of apatite, fluoroapatite, or dentine on tooth material, comprising

- a) an alkaline medium comprising calcium ions,
- b) a first gel which comprises gelatin and phosphate ions,
- c) a second gel, which is free of phosphate ions and calcium ions, capable of covering a first layer of said first gel with a layer of this second gel, and
- d) a solution containing calcium ions.

54. (Withdrawn) A process for the growth of apatite, fluoroapatite, or dentine on tooth material, comprising the steps

- (i) treating said tooth material with an alkaline medium comprising calcium ions, thereafter
- (ii) applying a first gel which comprises gelatin and phosphate ions to said tooth material, and thereafter
- (iii) applying a second gel which is free of phosphate ions and calcium ions for covering a first layer of the first gel with a layer of this second gel, and thereafter
- (iv) applying a solution containing calcium ions to said tooth material,

wherein said application steps are effective in causing a building up of apatite, fluoroapatite, or dentine on the surface of the tooth material.

55. (Withdrawn) A kit for the growth of apatite, fluoroapatite or dentine on tooth material, comprising

- (i) an alkaline medium, the alkaline medium further comprising calcium ions,
- (ii) a first gel which comprises gelatin and phosphate ions, and
- (iii) a second gel which is free of phosphate ions and contains calcium ions, which is capable of covering a first layer of the first gel with a layer of this second gel.

56. (Withdrawn) A process for the growth of apatite, fluoroapatite or dentine on tooth material, comprising the steps

- (i) treating said tooth material with an alkaline medium, the alkaline medium comprising calcium ions, thereafter
- (ii) applying a first gel which comprises gelatin and phosphate ions to said tooth material, and thereafter
- (iii) applying a second gel which is free of phosphate ions and contains calcium ions for covering a first layer of the first gel with a layer of this second gel,

wherein said application steps are effective in causing a building up of apatite, fluoroapatite or dentine on the surface of the tooth material.